

The Planters' Chronicle.

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THE U. P. A. S. I.

(INCORPORATED)

Contents.

The Scientific Department publishes an article on Die Back disease of Hevea, and draws the attention of those who require Monkey Jacks to the fact, that copies of the latest catalogues have been sent to the Honorary Secretaries of the District Associations. There has recently been a good demand for these.

The proceedings of four well attended District Association Meetings are published: Those of South Travancore, Mundakayam, Anamalai and South Mysore.

The F. M. S. Government are proposing to bring in a new law for the protection of trees, plants and cultivated products from disease and plant pests.

Correspondence again takes up a considerable space, and we but re-echo Mr. Danvers' hope that "this has come to stay." Letters similar in tone and matter as written by Mr. Danvers, will be very welcome to all our readers. We wish to encourage the discussion of all planting matters in our columns, and the example set by Mr. Danvers will, we hope, be continued, not only by men of wide experience, but by the younger generation.

"Curer" asks two pertinent questions from "Sleeping Brother" requiring replies, which we trust will be forthcoming.

Under the heading of *Green Rug* we publish a letter which makes a suggestion as to another way of getting rid of this pest.

The Planting Expert replies to Mr. Danvers' questions about composts, and the table accompanying his letter is very convincing.

In this number is completed Mr. Buxendale's interesting paper at the New York Exhibition. Read as a whole, it should be interesting to those Rubber Planters who will be attending the Annual Meeting, raising as it does many points for discussion and reflection.

The Secretary hopes, that during the Annual Meeting he will be able to arrange for a demonstration of the use of dynamite in planting. Through the kindness of Mr. Krumbiegel, Economic Botanist, the Secretary hopes to have the demonstration at the Lal Bagh.

THE SCIENTIFIC DEPARTMENT, U.P.A.S.I.

Die-Back Disease of Hevea.—Several specimens of this disease have been sent in this year. It attacks the pods of the Hevea causing them to rot and fall off and this is often followed by the death of the young branches and an attendant leaf fall. The disease is caused in the first place by a fungus known scientifically as *Gloeosporium alborubrum*. Green shoots of Hevea are often killed by wind, but when this is the case they die back from the tip. The fungus nearly always attacks the shoot at the middle of its length. The place attacked becomes dark brown and this discolouration gradually spreads and the leaves fall off as the diseased area reaches them. This fungus in itself does little harm as new shoots are put out, but it is apt to be followed by a second fungus, *Botryodiplodia theobromae* which gains an entrance to the tree through the dead wood caused by the *Gloeosporium*, and in extreme cases this can kill the tree. The combination of the two fungi is the disease usually called 'die-back.' It is advisable to cut off and burn all the dead shoots as soon as they are noticed and to collect the diseased pods and destroy them. In many cases no doubt the death of the green shoots leads to nothing further, but the *Botryodiplodia* is a very common fungus on dead wood of all kinds and it is advisable to adopt precautionary measures. A detailed account of the disease will be found in Petch's book "The Physiology and Diseases of Hevea brasiliensis."

Monkey Jacks.—On a number of estates it is found advisable when removing shade trees to take out the stumps at once so as to avoid all risks of subsequent root diseases attacking the surrounding crop. For this purpose the Trewbella Monkey Jack is largely used and has generally given satisfaction. A new catalogue has recently been received from this Firm and copies have been sent to the Honorary Secretary of each Planters' Association. Those who are thinking of buying these Jacks should apply to the Secretary of their district association for the catalogue. The Manager writes me that they are now making a new implement, the Monkey Winch, an enormously powerful tool which under some conditions at least promises to be even a greater success than the Monkey Jack. He has kindly sent me a few catalogues of this implement, and I shall be pleased to send these to anyone who cares to see them, or to obtain for them any information they require from the Firm.

In the *Diplomatic and Consular Report* on Russia for 1912 the Consul General says that in 1911 he called attention to the falling off of the Russian consumption of China tea in favour of Indian tea. About 30 per cent of the total imports both in 1911 and 1912 came from China. There was an increase of imports from Calcutta and a decrease from Colombo. The import of Green Tea fell to less than one half of the 1911 imports, not so much from decrease of consumption, but because the consumption for 1911 had been overestimated and large stocks were left in hand.

Import of Tea into Russia.

Black.

From—	1911.	1912.
London	... 7,369,300 lbs.	8,009,500 lbs.
Calcutta	... 27,200,400 "	36,297,600 "
Colombo	... 25,868,800 "	21,229,000 "
Java	... 4,278,600 "	2,615,500 "
China	... 27,630,300 "	30,561,600 "
Total	... 92,355,400 "	98,713,200 "

R. D. A.

DISTRICT PLANTERS' ASSOCIATIONS.**South Travancore Planters' Association.**

Proceedings of the 3rd Quarterly Meeting held at the Quilon Club on Saturday, July 26th, 1913.

PRESENT.—Messrs. Chas. Brander (in the Chair), T. P. Alexander, E. Lord, A. V. Con, H. S. K. Morrell, Chas. Hall, J. B. Cook, E. C. Sherman, R. Ross, L. G. Knight, J. Stewart, S. Sinclair, L. M. Young, J. H. Parkinson, Val. Mardon, and H. C. Seymour, Honorary Secretary. **Visitors:**—Messrs. R. C. Milbank, E. Smith, J. Mackie, J. L. Henderson, W. Clare, and W. Murray.

Agenda Paper.—1. Confirm Minutes of the last meeting. 2. Election of a delegate for Bangalore. 3. To settle a date for the visit of the Scientific Officer to the district for 1913. 4. Vadaserikara-Sittar Road and correspondence anent the same. 5. Mr. J. B. Cook's resolution:—"That the standing Committee revise the rules and draft a memorandum of the suggested alterations and additions and that a copy of such memorandum be sent to every member of the Association at least one month before the next Annual General Meeting." 6. Correspondence and any other business properly brought before the meeting.

The Minutes of the last meeting being confirmed, the next item on the agenda was then dealt with, namely that of electing a delegate for Bangalore. Mr. Cook who was elected delegate at the meeting held in April, was unable to go. Proposed by Mr. Cook and seconded by Mr. Val Mardon: "That Mr. Parkinson be asked to represent this Association at Bangalore." Mr. Parkinson consenting, Mr. Stewart proposed: that owing to the distance the delegate for this Association has to travel that he be allowed actual expenses up to Rs. 200 by this Association. This was seconded by Mr. Lord.

Scientific Officer.—Mr. Stewart proposed and Mr. Ross seconded "that the Bangalore delegate be instructed to ask for the services of the Scientific Officer on or about October, 25th and that a programme of the estates he shall visit be drawn up by the Committee."

Mr. J. B. Cook's resolution was then put to the meeting and seconded by Mr. Stewart. The Standing Committee being asked to revise the rules.

Vadaserikara-Sittar Road.—As this item was of a semi-private nature Mr. Cook proposed and Mr. Lord seconded "that the Correspondence be placed officially by this Association before the Chief Engineer, D. P. W. of Travancore."

Correspondence.—A letter was read from the Kanan Devan Planters' Association asking this Association to support them in a protest to H. H. Government against any further labour legislation.

After a lengthy discussion it was proposed by Mr. Lord, seconded by Mr. Knight "That this Association strongly support the Kanan Devan P. A. in a united protest to H. H. Government against any further labour legislation."

There being no further business to be conducted, the Meeting terminated with a vote of thanks to the Chair and also to the Quilon Club for the use of its buildings.

(Signed) HUGH C. SEYMOUR,

Honorary Secretary.

Mundakayam Planters' Association.

Minutes of the General Quarterly Meeting of the Mundakayam Planters' Association, held at Peravanthanam Bungalow on Saturday, August 2nd, 1913 at 10 a.m.

PRESENT.—Messrs. R. Harley (Chairman), B. M. Behr, E. S. Conner, R. D. Fuge, E. R. Gudgeon, Eric Hall, Ashton Hamond, J. Y. M. Henderson, C. W. Horsfall, H. M. E. Howson, R. Lescher, C. Martin, K. C. Milbank, H. B. Kirk and Edwin Vincent (Honorary Secretary). *By proxy:* E. Wilson. *Visitors:*—Messrs. W. A. J. Milner and T. M. S. Henderson.

Business:—The Minutes of the last meeting were taken as read.

1. *Election of a Committee Member.*—Mr. B. M. Behr, was the only nominee and he was unanimously elected to the vacancy on the General Committee.

2. *Election of a Finance Committee.*—In accordance with the resolution passed at the last meeting, a Finance Committee was elected to discuss the disposal of the Association's surplus Funds. Messrs. R. Harley, B. M. Behr, and H. B. Kirk were elected.

3. *Bangalore Delegate.*—The Chairman suggested that this year two delegates should be sent to the U. P. A. S. I. Annual General Meeting at Bangalore, and of three nominees, Messrs. Ashton Hamond and the Honorary Secretary (Mr. Edwin Vincent) were elected.

4. *Instructions to the Delegates.*—The Delegates were instructed as follows:—

Scientific Department.—To support all suggestions for increased efficiency, excepting those of a financial nature which should be referred to the Association for its decision.

P. B. F.—To ask for yearly statements of accounts to be sent to patrons of the Fund.

Election of Office Bearers.—To nominate Mr. J. A. Richardson as Committee member.

5. *Building Rates.*—Mr. Harley said that in sending our rates some errors have crept in and proposed sending the list back for revision. The Rates will then be printed and sent to every member.—*Carried.*

6. *Bandy Shelters.*—The Chairman said that since the establishment of Mundakayam as a town, no bandies were allowed to rest on the highway, and in the absence of any specified places for shelter, this was causing great inconvenience and hardship to bandy-men. He thought the rule also applied to the whole way between Kottayam and Mundakayam. He proposed that Government be approached by the Association and asked to lay off places where bandymen could draw up and that shelters be erected at these places for bulls. Mr. Behr seconded the proposal which was carried unanimously.

7. *The Mundakayam Post Office.*—Mr. Behr proposed that the U. P. A. S. I. be asked to address the Postmaster-General with a view to improving the postal arrangements in the District. Seconded by Mr. Hamond.

The Honorary Secretary pointed out that he was corresponding with the Postmaster-General who was giving the matter his attention, but nothing had been done. Mr. Harley proposed as an amendment : - that the Postmaster-General be again approached. The amendment was lost and Mr. Behr's original resolution was carried.

8. *Oil Fuel.*—Mr. Hamond proposed and Mr. Howson seconded that the Honorary Secretary be asked to write to Messrs. Shaw Wallace & Co's agents, with regard to the establishment of a liquid fuel depot in Mundakayam, and that Peermade Planters be asked to support such an establishment, *Carried.*

9. *The Scientific Officer Scheme.*—The Honorary Secretary read a letter from Mr. Richardson suggesting that should the Scheme go through, the Scientific Officer should be quartered on the Government experimental plot at Periyar. As no reply had been received from Messrs. Harrisons and Crosfield as to whether they would join or not, it was proposed that Mr. Richardson's proposal be negatived awaiting Messrs. Harrisons and Crosfield's decision. Proposed by Mr. Kirk and seconded by Mr. Leacher.

10. *The Kodimatha Landing Stage.*—On Mr. Hamond's proposal it was decided to approach the Kottayam Town Improvement Committee on the subject of the inadequate space of the Public Landing Stage at Kodimatha, Kottayam.

11. *Correspondence.*—Read letter No. 7326 L. R. F. from the Chief Secretary to Government with extract of Government Proceedings stating "The hours prescribed by the Government for all Offices and Courts in the State, are from 11 a. m. to 5 p. m. on all days except holidays."

As Government assumed that the prescribed hours of attendance are being adhered to, Mr. Kirk stated his experience, that whereas the hours of court at Kanjirapalli were from 10 a. m. to 3 p. m., at Peermade the hours were from 11 a. m. to 4 p. m.

Read P. W. 3337/165 of 08 from the Chief Secretary to Government on the subject of improvements to the Kottayam-Kumili road. No discussion.

Read 5456 L. R. F. from Chief Secretary to Government on subject of cattle disease in Mundakayam. No discussion.

Read letters from the family of the late Mr. R. A. Fraser thanking the Association for its vote of condolence.

Read letter from Messrs. Spencer & Co. with regard to the establishment of a hotel at Muttoncherry, Cochin. The Meeting did not think a hotel in Muttoncherry would receive much support from the local planters.

With votes of thanks to the Chair and to Mr. H. B. Kirk for his hospitality, the meeting then terminated.

(Signed) R. HARLEY,

Chairman.

(..) EDWIN VINCENT,

Honorary Secretary.

Anamalai Planters' Association

Proceedings of a Half Yearly General Meeting of the Anamalai Planters' Association held at the Valparai Bungalow at 11 a.m. on Friday, 25th July 1913.

PRESENT.—Messrs. C. R. T. Congreve, A. C. Cotton, Geo. L. Duncan (Chairman), R. Fowke, E. N. House, C. Howland, J. H. Ireland-Jones, J. E. Sampson, E. W. Simcock, M. B. Pollard, Urquhart, J. H. Robinson (Honorary Secretary).

The Minutes of the Annual General Meeting held at Kalianapandal Bungalow, on 27th February last, were confirmed.

1. *Accounts.*—The accounts for the half year were laid on the table.

2. *The Annual Meeting of the U. P. A. S. I.*—Messrs. Duncan and Congreve were appointed as Delegates. The Agenda paper was gone through, and instructions on the various items were given to the Delegates.

The retention of the Scientific Officer was strongly advocated.

The Meeting were of opinion that not nearly enough time was given at the Annual Meeting of the U. P. A. S. I. to Labour matters and sincerely trusted that something definite would be settled this year to check unscrupulous outside Labour Agencies enticing away our labour from our Estates.

The Meeting also strongly advocated the backing up of any Scheme which might be formed that would, in any way, prevent advanced Labour from leaving the country and also urged the necessity of having all Recruiting Agents Licensed.

3. *Labour.*—This all important subject took up the greater part of the Meeting's time. Both Mr. Nicolls' and Mr. Waddington's schemes for the "Registration of Maistries" were put before the Meeting.

The meeting contended that Mr. Nicolls' scheme did not go far enough and that it would be quite beyond the powers of Honorary Secretaries of Associations to give up the time necessary for the working of such a scheme.

Mr. Waddington's scheme was most favourably received by the Meeting and the following resolution was adopted and carried unanimously:—Resolved: "That the Delegates to the U. P. A. S. I. shall strongly support Mr. Waddington's scheme for the Registration of Maistries; but, at the same time, that the meeting is of opinion that the Registration of Finger Prints in conjunction with the scheme, is absolutely essential, and that the Finger Prints of the Maistries should be registered in acid on the back of the Metal Number Tickets that would be issued by the Manager of the Central Office to the different Maistries."

The District Magistrate wrote saying that Government had suggested that the provisions of the Madras Planters' Labour Act of 1903 should be extended to all Planting Districts and requesting to be advised whether this Association was in favour of the proposal.

As the Meeting was not unanimous on the subject, it was proposed by Mr. Simcock and seconded by Mr. Congreve: "That the standing Committee convene a Meeting, at an early date, to consider the matter and to give the District Magistrate the Association's reply to his letter."—*Carried unanimously.*

4. *Fertilisers.*—The subject was discussed, under that heading on the U. P. A. S. I. Agenda, and Delegates were instructed to bring up a resolution, or to support any such, which would help to suppress adulteration and thereby lessen the loss in cost of transporting useless material from long distances to our Estates.

5. *Access to New Estates.*—The Collector's letter No. 585 sub. of 10 dated 10th June 1913, was put before the Meeting. It was understood from this letter that the Collector was not in sympathy with the planters upon this most important matter, and in view of the same, the Meeting was of opinion that the only thing now that could be done was for those persons requiring access to their New Blocks to get private concessions, or proceed as laid down in G.O. No. 2969 dated 3rd October 1912.

6. *District Transport.*—It was decided to await further estimates for the proposed Aerial Ropeway into the District.

The District Forest Officer's letter No. 1149 sub. 13 of July 5th 1913, proposing that all estates should use the same printed form for Brake-pole passes was read to the meeting. All the members present agreed to adopt the same form of Pass for Brake-poles.

7. *Medical.*—The Meeting listened with surprise to Major Long's letter, No. 2452 of 13 dated 17th July 1913, especially as both the District Medical Officer and Collector had inspected and approved of the Stanmore Bungalow as temporary quarters for the Sub-Assistant Surgeon.

The Honorary Secretary was directed to address a strong letter to the District Medical Officer on the subject.

At the request of Mr. Marden, the status of carpenters in regard to payments made to the Sub-Assistant Surgeon for attending on them, was inquired into. It was unanimously agreed that carpenters should be paid for at the same rate as that allowed for coolies.

8. *Pollachi Rest House.*—Mr. Duncan informed the Meeting that he heard from the Sub-Collector that steps were being taken to have matters remedied.

9. *Cooly shelters on Ghant.*—No further information about these very necessary shelters had been received from Government. As the matter was such an urgent one, the Honorary Secretary was requested to write to the Collector, and inform him, that if Government gave the Association Rs. 1,500 to build two shelters on the Ghant, the planters themselves would erect the shelters, the building of which should be left to their discretion, and that if the buildings should cost more than Rs. 1,500, the Association would meet the excess, and also that the Association agreed to pay for the annual upkeep of the buildings.

10. *Postal and Telegraph.*—Recorded that Mr. Duncan required the building in which the postal affairs were now carried on from the 1st April 1914, and that he would give notice of the same to the postal authorities.

11. *Magistrate for the District.*—It was recorded that Government could not appoint a Special Magistrate for the district for the purpose of issuing Warrants under Act XIII of 1859.

Warrants have to be taken out in Pollachi. This is found to be most unsatisfactory. Maistries are given money to go down to issue warrants, they remain for days off the Estate, often spending the money and not taking out any Warrants.

Should Warrants be issued, ~~Maladies~~ have to attend the Pollachi Court which means that more money must be given them, and another lengthy period is spent away from their work.

It was therefore proposed by Mr. Howland and seconded by Mr. Jones:—"That this Association request Government to depute the Sub-Magistrate of Pollachi to hold a Court for a few days every month at Tyerpadi, for the purpose of issuing Warrants and for trying cases falling under the Breach of Contract Act." Carried unanimously.

New Members.—The following were elected Members:—Mr. R. Michaelson-Yeates.—Proposed by Mr. Robinson, and seconded by Mr. Congreve.

Mr. R. Brierly.—Proposed by Mr. Fowke, and seconded by Mr. Pollard. Urquhart.

The Meeting were sorry to record the loss of Mr. B. A. Marden who had lately left the district to take up his new appointment.

With a cordial vote of thanks to the Chairman for presiding, the Meeting terminated.

(Signed) GEO. L. DUNCAN,

Chairman,

J. HATTON ROBINSON,

Honorary Secretary.

South Mysore Planters' Association.

Special General Meeting held at Lingapur on August 1st 1913.

PRESENT.—Messrs. W. L. Crawford (Chairman), D. Jackson, C. Lake, C. J. Hayward, H. F. Anderson, C. K. Pittock, T. Anderson, E. V. Hunt, K. Thammayer, W. F. Scholfield, M. J. Woodbridge, (Honorary Secretary) G. N. Frattini, Scientific Officer, West, L. Hill, *Visitors*.

Instructions to Delegates to U. P. A.—The draft agenda of the U. P. A. was gone through and all subjects of interest to this Association were discussed, so that the delegates should be able to get a general idea of the opinions of members on the various subjects to be brought up at the U. P. A. Meeting.

Introduction into Mysore of an Act similar to Act I of 1903.—*Resolved.* "That a referendum of all members of this Association be taken with a view to finding out if a majority are in favour of the introduction into Mysore of an Act similar to Act I of 1903." Proposed by Mr. C. K. Pittock and seconded by Mr. H. F. Anderson and carried.

Arsikere-Mangalore Railway.—The copies of correspondence on this subject were placed before the meeting and the following resolution put from the chair and carried:—"That the South Mysore Planters' Association approach the Coorg Planters' Association for their co-operation in urging upon their respective Governments, the necessity of giving Mysore and Coorg direct access to the West Coast by a Light or Metre Railway to the port of Mangalore."

Seat on Hassan District Board.—After the Deputy Commissioner's letter No. 77 Mis. of the 17th July had been read, and preceding corre-

pondence and records gone through the following resolution was carried without dissent: "That this Association after careful perusal of the Deputy Commissioner's letter No. 77 Mis. dated 17th July, 1913, is of opinion that no satisfactory explanation has been given to the Association, and our representative not being notified of the dissolution of the District Fund Board or of the failure to ask the Association to submit a name for nomination, as in the past; and is further of the opinion that in view of the records of past elections of representatives of this Association which have already been submitted to the Deputy Commissioner, an apparent slight has been passed on this Association and until an explanation is forthcoming, the Association is not prepared to submit the name of a member for nomination to a seat on the Board." The Honorary Secretary was instructed to send a copy of this resolution to the Dewan.

Election of Delegate to Dussera Representative Assembly.—Mr. C. Lake was elected.

Roads.—Proposed by Mr. C. Lake and seconded by Mr. C. J. Hayward that some of the roads in the Mulnaad being now in a worse condition than they have been for years owing to the neglect or incompetence of the Local Officials, the Dewan be written to, requesting him to take some steps to insure that the road repairs for which Government have budgetted for be carried out in an efficient manner.

Mail Service.—The Honorary Secretary was instructed to write to the Post Master General asking him to try and improve the Mail service to Saklasapur.

The Honorary Secretary was asked to put on the agenda for the next meeting the subject of "Co operation in the purchase of 'Fertilisers.'"

(Signed) M. J. WOODBRIDGE.

Hony. Secretary.

MALAYA AND AGRICULTURAL PESTS.

The F. M. S. Government is proposing to repeal the Coconut trees Preservation Enactment of 1898 in favour of a new law for the "protection of trees, plants and cultivated products from disease and plant pests." The stringent measures of the old Act against red and rhinoceros beetles are retained, but the new Act will considerably strengthen the hands of the authorities. For the above beetles, it is provided that trees attacked by these pests must be burned. The new Act will provide for the entry, on any land, and at any time, of the Inspecting officer for the purposes of examination; and he is empowered to remove by cutting, digging, or otherwise, such portions of any plant as he may think expedient to remove for the purpose of examination or investigation. In regard to compensation for coconut trees ordered to be destroyed, the Government safeguards itself by providing: "That the compensation in respect of any one tree shall not exceed five dollars; and that the compensation given in one year to any one person shall not exceed one hundred dollars." The scale of penalties range from five hundred dollars downwards, and the procedure in cases where owners fail to obey the orders of the Inspecting officer of the Supervisory Committee do not err on the side of weakness. In view of the agitation of the various Ceylon P. A.'s against the unsatisfactory nature of the Plant Pests Ordinance, and the growing prevalence of shot hole borer, some such more stringent Act would not come amiss in Ceylon. —*The Ceylon Observer.*

CORRESPONDENCE.

Olla Podrida.

The Editor,

The Planters' Chronicle,

Sir,—My thanks are due to Mr. Anstead and Dr. Coleman for their illuminating replies on the subject of the fertilisation of coffee. I see that developing self pollination after beginning as cross fertilisers is not necessarily retrogressive, though the examples referred to by Dr. Coleman would appear to have known better days.

I am afraid that I have no means of comparing the quality of the beans resulting from cross and self pollination, and imagine that nothing but very carefully conducted experiments can throw any light on this. In the field, so many circumstances would confuse the issue—manures, difference in season, pruning and nonpruning, etc. Even if I had any carefully preserved beans from a crop known to have been well visited when in blossom by bees and insects, and they showed no superiority to those of the present season (notably deficient in such visitors) I should be at a loss to judge the position; for my manures have been considerably changed, the season is abnormally favourable, and "who knows," as the coolies say, if the wind was blowing this year when blossom set?

In his article on composts Mr. Anstead omitted the cost of the cattle manure in sample B, which it seems to me should be added to the total given, as the full nitrogen content of the compost is taken. Even then this compost seems a very economical one, compared with poonac—and it would be of great interest if Mr. Anstead would work out for us the value of the phosphoric acid and potash contents too, as this would enable us to judge the amount of compost that would represent the manurial value of an ordinary dose of poonac, bone and potash mixture, thus possibly allowing us to distribute the bulk over a larger area than we might otherwise do. I have great faith in the value of organic matter, and would like to make it go as far as possible, without sacrificing efficiency.

While reading last week of the effect of manganiferous soils on pineapple roots, these "having characteristic swollen tips, marking the cessation of the lateral growth of the roots, death and decay immediately following," I was reminded of a pineapple-looking bulb which I once pulled up to examine. It was partly buried in the soil, came out very easily, but was attached to a vigorous root which had pierced it just below the ground surface, and this root I traced back to a coffee stem. On opening the bulb (which was about 4 inch high by 3 inch diameter) I found that the coffee root had developed a swollen tip about the size of a cherry, and spongy looking; and it had evidently got just where it liked, and was imbibing the juice of the pineapple—marked bulb comfortably.

I presume this was a healthy bulbous root-end, developed to suit the delightful circumstances. If there had then been a Scientific Officer, he would have been asked to analyse the juice of that pineapple host.

It is pleasant to see the full use now being made of your columns for correspondence, and I hope that those who know will continue to instruct us who don't—and that we who want to know, don't you know, will continue to ask questions and extract information from those who can impart it. This was one of the chief ideas when the paper was started; and though it has been long in coming, one hopes it has come to stay.

Yours faithfully,

(Signed) C. DANVERS.

Freights.

11th August, 1913.

THE EDITOR,

The Planters' Chronicle.

Bangalore.

Dear Sir,—In your issue of the 9th instant appears a statement over the signature of "Sleeping Brother" which at any rate, so far as can be judged from your editorial notes, is anticipated to cause consternation amongst the Caring fraternity.

Before however the Bomb? can be said to have accomplished its objective, I would ask "Sleeping Brother" one or two questions in connexion with the returns? he annually? receives:—

1. Was the rebate paid on shipping charges, or on freight?
2. If on freight? which Coast does he usually ship from?

Yours faithfully,

"CUREE"

Green Bug.

Waterfall Estate,

Pollachi, P. O.

Coimbatore, 7-8-13.

THE EDITOR,

The Planters' Chronicle.

Dear Sir,—After seeing so much correspondence in the "Planters Chronicle" about Pruning and Spraying for Green Bug, I am surprised to see that no one has mentioned such an important item as scraping of Coffee stems. As on this estate Green Bug was totally neglected for about seven years and last year after a careful pruning (not heavy) and a good scraping of stems, the Green Bug has disappeared and in place of the filthy black trees there is now a rattling good crop. Of course we have to go through September and October before I can say we are free from it.

My rainfall is 115 inches chiefly S. W. monsoon but a good splash of the N. E.

I am, dear Sir,

Yours faithfully,

(Signed) H. W. deSALIS.

Composts.

No. 697 1913.

Office of the Planting Expert,

Bangalore,

12th August, 1913.

THE EDITOR,

The Planters' Chronicle.

Dear Sir,—As Mr. Danvers claims that the cost of the Cattle Manure should be charged against the cost of making a compost, I must claim that

the value of the Potash and Phosphoric Acid in the final compost must be credited to it, also the saving in transport as compared with an artificial manure containing an equivalent amount of plant food, a most important item.

Suppose we charge up the cattle manure as being worth 40% of the total cost of the making the compost, viz., Rs. 63. This is I think a liberal allowance. We can then make out a sort of balance sheet as under.

Cost of making 50 tons Compost.		Value of Compost.	
	Rs.		
3 tons Bone Meal	... 285	1680 lb. Nitrogen @ 8 as.	... 840
Cattle manure	... 126	3214 lb. Phosphoric Acid	...
Labour of making	... 20	" 1 an.	... 201
Labour removing from shed	...	3203 lb. Potash @ 2 as. 2 p.	... 433
to pit	... 10	Transport on 50 tons @ Rs.5	...
		per ton	... 250
Total	... 441	Total	... 1624

This leaves a very considerable margin of profit.

With regard to Mr. Danver's second question one ton of compost A is equivalent to a mixture of 687 lbs. White Castor Poonac, 251 lbs. of Basic Slag and 79 lbs. of Sulphate of Potash, and one ton of Compost B is equivalent to a mixture of 560 lbs. of White Castor Poonac, 293 lbs. of Basic Slag and 105 lbs. of Sulphate of Potash.

This mixture for the case of Compost B would cost Rs. 36 per ton exclusive of freight, while as made and valued above the equivalent Compost costs only about Rs. 9 and is worth about Rs. 33.

The application of both Composts should be at the rate of about one ton per acre to good coffee.

Yours faithfully,

RUDOLPH D. ANSTEAD,

Planting Expert.

TEA IN PERSIA.

The Diplomatic and Consular Report for 1912 on the trade of the Consular District of Bushire states that Tea occupies the third place of importance among merchandise imported to Persia. The total import to Persia was for:—

1910—11	... 3,483 tons.
1911—12	... 4,185 tons.

It is an export of the greatest interest to India yet the import to all Persia in 1911-12 was from and via:—

India	... 1,673 tons.
Russia	... 2,286 tons.
Dutch East Indies	... 160 tons.

Smuggling more especially from Bahrein to Tangistan on the Persian coast is on the upward trend and is said to be confined almost entirely to Indian Teas because chests from India arrive already wrapped in skins for protection from weather on the journey upcountry in Persia, while China and Batavian (Lamseh) tea is not so packed,

RUBBER.

The Plantation Rubber Industry.

by

CYRIL E. S. BAXENDALE.

A Paper Read at the Third International Rubber Conference, held in New York, 1912.

(Continued.)

CULTIVATION.

Then, as there were not quite enough experienced planters to go round, assistants, as well as managers, thought they would like to participate in the general prosperity and expected either larger salaries or else commissions. Our coolies also felt that what was good for master must be good for man, and demanded either more pay or less work—generally both. Even the Government suffered from the prevailing spirit and on new applications increased the rent and charged a premium of the land. Shareholders often seem to forget to study the other side of the profit and loss account and to compare the price actually obtained against the price we figured on when estimating the cost of production. Moreover, we did not contemplate tapping our trees at four years old, at which age the rubber is naturally more expensive to collect.

I admit that I speak with prejudice, but it seems to me only right and proper that those responsible for supervision should enjoy some of the fruits of the industry, when the industry can well afford it. There are many other items of expenditure which will automatically decline when the value falls.

CLOSE vs. WIDE PLANTING.

I do not desire to encourage the expectation that the yields from our closely planted trees will approach that obtained from those first planted. The latter were usually planted at wide distances, and enjoy as much light and air as the heart of a tree can desire. Ten years ago, I collected 18 lbs. of rubber in 35 days from one of the trees planted by Sir Hugh Low; while from avenue trees of my own planting, 14 years old and 7 feet in girth, results have been obtained far in excess of those planted in the fields. It is for this reason that I am inclined to deplore references in published reports to yields *per tree*. All calculations should be based upon the yield per acre. Probably the average number of trees planted to the acre in Malaya is nearer 200 than 100, and thinning out is inevitable as the trees expand. Thus, your trees are an uncertain quantity, whereas the acre is always the same.

A well-known botanist who studied the *Hevea* in its native land used to urge us strongly to plant at 40 x 40 feet, i.e., 27 trees to the acre.

The *Hevea*, like most quick growing trees, is extremely brittle; and, at this distance, would suffer severely from the wind, but if I allowed, for the sake of argument, that every tree reached maturity, I found by comparing the results from avenue trees against the results from closely planted fields that up to 8 years old I should have harvested less than half the quantity of rubber from the same area, had I adopted our botanical friend's advice.

It is true that I should have economised to a certain extent on the actual cost of collection but not sufficiently to compensate for the loss of rubber.

Thinning out as the trees get older and require more space, has been opposed on the ground that the dead roots encourage the spread of disease. I have pursued this policy for several years past and cannot find that the fear is justified. Indeed, as the years roll on, I become less anxious about plant diseases and pests of all kinds. *Fomes Semiotostus* (our worst fungus disease) and white ants (the most destructive of our insect pests) have lost their terrors for me now that I know how to keep them in check; and as the loss from all causes on the plantations I am connected with does not average two per cent. after attaining maturity, I cannot, justly, be charged with "turning the blind eye" in that direction.

LABOR PROSPECTS.

The most plausible argument against the future output of plantations is that of shortage of labour. It is true that most plantations are at times short of labour, but I think this must generally be attributed to the Manager's desire to keep down expenses. Out of a total of 227,985 coolies employed on Malayan plantations 126,665 or rather more than half, were imported from India. The average period of service on the plantation does not exceed two years—although many of these return after a holiday in their native land; and the difficulty is to engage during the recruiting season the exact number that are required to make good the probable departures during the rest of the year, without becoming burdened at the beginning with labour for which there is no profitable employment.

Within two years the plantation labour force has more than doubled. I do not believe that by increasing the rate of wages any great stimulus would be given to Indian emigration. Tamil coolies are more easily recruited for some plantation at half the wages paid on others which are unpopular, owing to unhealthiness or to some other cause; and this fact is becoming more clearly marked, since those employed at the lowest rates have found themselves able to remit more than half their earnings to India, and their savings in three or four years are sufficient to establish them as capitalists when they return to their native villages.

The future success of estates which are unpopular with Indians will depend on the attractions they can offer to Chinese or Japanese. To these, the rate of wages is of more importance than any other consideration; and there is practically no limit to the number that can be recruited—at a price.

It must be remembered that by doubling the cost of labour we do not double the cost of production. Generally speaking, the average cost of tapping is less than one-half the total cost of production, if we include home charges; and as the majority of the trees now being tapped have barely reached half their full yielding capacity, labour rates can, if necessary, be materially increased without raising the cost of production, when the trees attain maturity.

MANURING.

Recently, some consideration has been given to the question of manures. From Ceylon some interesting results have been reported, but in Malaya little has been done in this direction, except on some estates where the soil is excessively rich in humus, and lime has been applied to correct the acidity, with good results.

My own opinion is that for some years to come, at any rate, systematic cultivation of the soil will be of more value than any manure, but the experiments in Ceylon are deserving of attention; and the Agricultural Department of Malaya, if they have not already done so, might study the question with advantage.

FUTURE SUPPLIES.

It has been suggested to me that you will be interested in an estimate of the supplies that are to be obtained from plantation sources, and it is obvious that a paper of this kind would be incomplete without it. It is not easy to obtain reliable statistics of the cultivation in all the tropical countries in which rubber is grown. Naturally, the yields vary considerably, and the high price has undoubtedly encouraged more vigorous tapping on many plantations than would have been considered advisable if the price had been less tempting. I know fields where from 800 to 900 pounds an acre have been collected for two or three successive years, but I question if such high yields can be maintained. A first-class, well-managed plantation may be expected to yield an average of 500 to 600 pounds an acre for as many years as our experience guides us, but we must assume a considerably lower average from all plantations. The area under rubber in the Malay Peninsula at the end of 1911 amounted to 542,877 acres, and as far as I can ascertain the total area under this cultivation in the world amounts to about 1,000,000 acres. We know that during the half year ending June, 30, 1912, the exports from Malaya amounted to 9,038 tons, and from Ceylon to 2,252 tons. Allowing for the out-put from India, Sumatra, Java, etc. I estimate the total output of plantation rubber will be from 25,000 to 30,000 tons for the whole year. The annual increase will be fairly steady, and at about six years from date, the production is likely to amount to 100,000 tons per annum or, in other words, equal the total consumption of rubber during the year ending June 30, last.

During the year ending June 30, (1912), with rubber averaging 5 1/2 (say a dollar and a quarter) a pound, consumption—according to the figures recently published by Messrs. Hecht—increased by 25,482 tons. I am aware that this statement has been challenged by other authorities. We are told that they are *eminent* authorities, but as they unfortunately published their views anonymously, we are obliged to take their word for it.

The most pessimistic of these that I have read, calculates the increase at about 14,000 tons, and if we accept this figure in preference to Messrs. Hechts' (I don't know why we should), and assume that this increase will be maintained, the requirement six years hence will amount to 184,000 tons, so that the struggle between plantation and wild rubber does not appear to be very imminent.

I have now told you as well as I can what I believe to be the immediate course of events. To you gentlemen, who are manufacturers, I would say this, whether our achievements will lead to prosperity for *our* industry will depend entirely on the growth of *your* industry. Speaking personally of my first few years' experience in tropical agriculture, I was engaged in planting coffee. At the outset of my career in this line, the price in local currency and weights was \$40 a picul and I saw it fall to \$16. This experience is put in the shade by that of my brother planters who were interested in pepper and cinchona. Our misfortunes were due to the fact that an increased supply did not lead to any considerable increase in the demand

for these products. We have yet to hear of anyone who shakes the pepper castor more vigorously over his potatoes owing to a slump in the price of pepper, or increases his dose of quinine because the quantity of chinchona offered at the auction sale is in excess of anticipations.

The future of the rubber industry depends on whether the planter can confidently anticipate manufacturers digesting the increased supplies.

A well-managed, favourably situated, mature plantation can produce with a handsome profit at 2 6 (60 cents) a pound. It must be remembered that the increased demand depends on the new uses to which it may be put, the increased demand for uses to which it has hitherto been put, and the supply demanded by making good the losses by wear.

As an illustration of what I mean, I will take the case of solid and cushion tyres which if not now, will perhaps shortly absorb more rubber than is used for any other purpose. If we assume that 1,000,000 of these tyres are used through the world this year, and only the same number next year, the amount of rubber required on this account will, other things being equal, be only that amount necessary to replace the loss involved by wear and tear.

The irregularity of the cost has undoubtedly militated against its use in some directions. For instance, I am informed that whereas electric light mains and leads were in the past invariably insulated with rubber, paper insulation has been substituted in many cases. Experts tell me that rubber is preferable for this purpose, and no doubt a number of instances will occur to you gentlemen, where it would be preferable, if the price admitted of this use.

This brings me to the crucial question from the planter's point of view, and a question which my present audience is in a better position to make an authoritative reply to than any audience previously addressed by a planter.

We can guarantee an enormously increased supply of rubber and will in future years be content with a much lower price than now prevails. What we want to know is whether there is to be a glut in the market, and a scramble to sell, with every successive increase in the supply. Perhaps, gentlemen, you can allay the misgivings of those planters with the weaker faith in the future of the industry, and can send them, through me, assurances which will encourage them to hope for a continuance, even if in a modified degree, of the prosperity we have recently enjoyed—a prosperity which, I believe, has never been rivalled by any agricultural industry in all the history of the world.—*The India Rubber World.*

BRAZIL.

The Acting British Consul-General at Rio de Janeiro (Mr. E. Hambloch) reports that the import trade of Brazil as a whole, and especially of Rio de Janeiro, is likely to undergo considerable modification in the near future. The purchasing power of the country is bound to be affected by the adverse conditions of the rubber and coffee industries. Whatever the future may have in store for Brazil as a producing country, the present purchasing power is created almost entirely by coffee and rubber. The financial situation, which is rightly regarded with considerable alarm by all thinking people in Brazil, is accentuated by the gloomy prospects of those industries.—*Board of Trade Journal.*